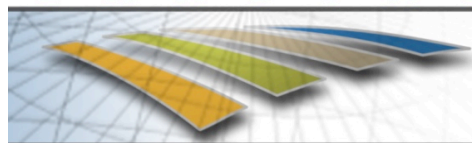


# U.S Geological Survey's Center for Earth Resources Observation and Science (EROS)



**Mike Headley**  
**USGS LDCM Project Manager**





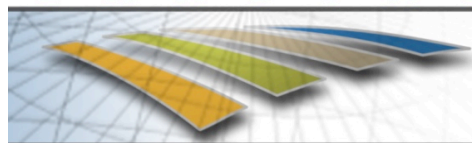
## EROS Background

**LDCM**

- Established in 1973 to support ERTS/Landsat
- Located 16 miles NE of Sioux Falls, SD on 318 acres; 300,000 sq ft. facility
- Central CONUS location supports earth resources satellite operations
- Staffed by approximately 90 civil servants and 600 contract personnel
- Home to the National Satellite Land Remote Sensing Data Archive (NSLRSDA) and NASA's Land Processes Distributed Active Archive Center (LP DAAC)







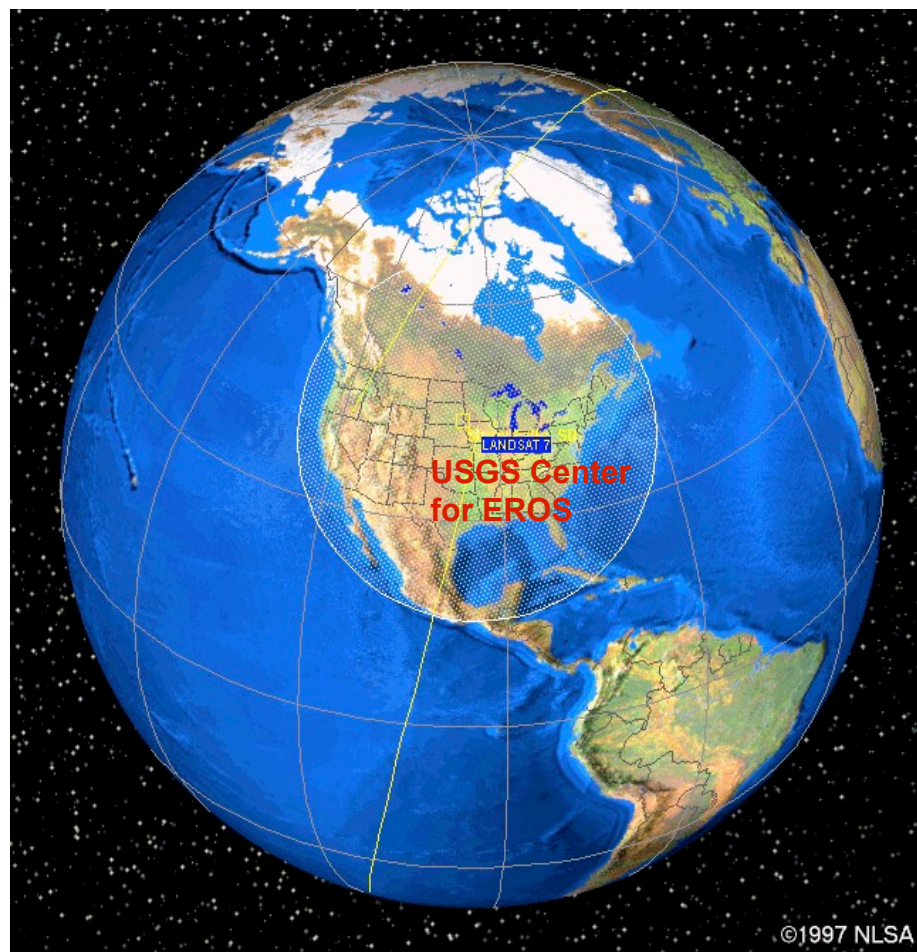
## EROS Mission

**LDCM**

**Science:** To promote applications, uses, and knowledge of land information to better understand our planet

**Data Access:** To ensure that scientists, researchers, businesses, decision makers, and the public have ready access to land information

**Data Archives:** To safeguard and expand the national archive of remotely sensed land data





The banner features a background of a satellite map of the Earth. On the left, there are four overlapping, curved rectangular shapes in yellow, green, and blue. The text "EROS Satellite Operations Activities" is prominently displayed in the center in a bold, black font.

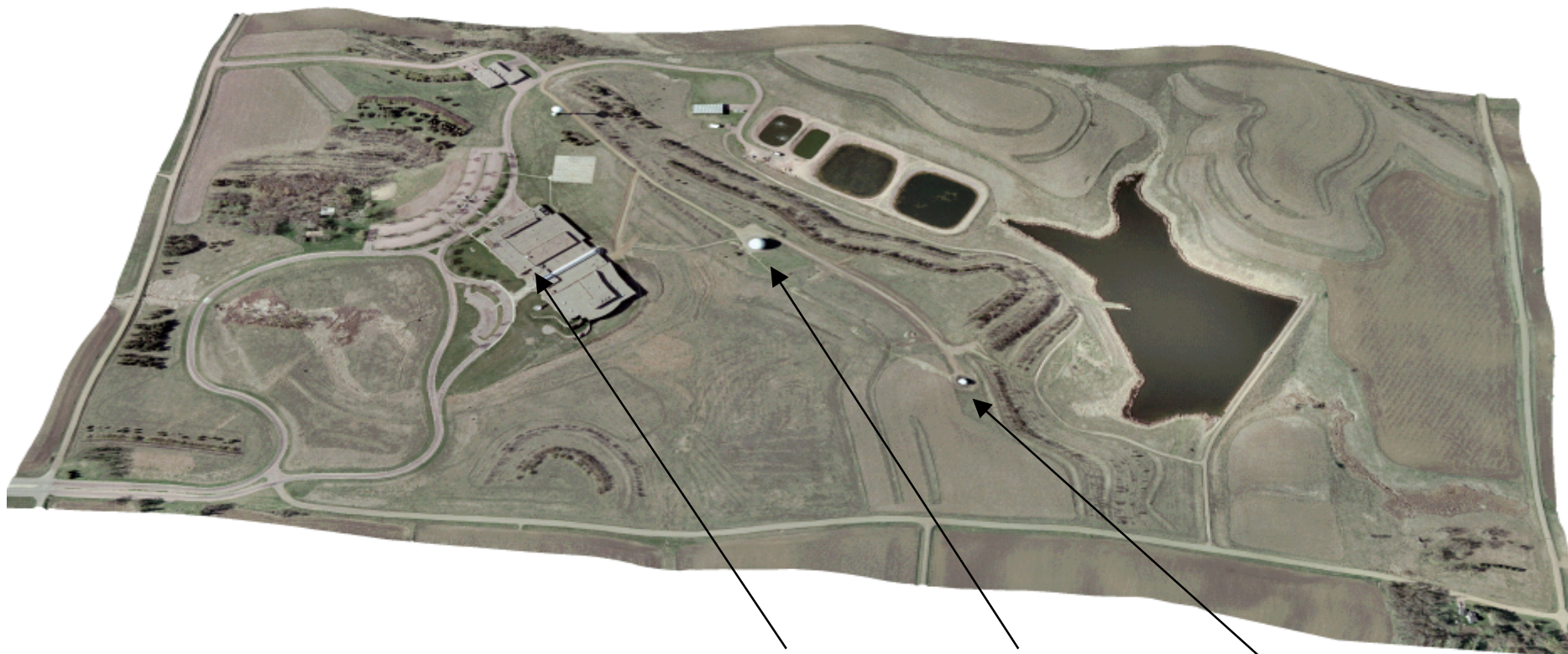
## EROS Satellite Operations Activities

**LDCM**

- **EROS ground station operations**
  - 19x7 operations schedule; 24x7 capable
  - X-band image data reception
  - S-band TT&C communications support
- **Active satellite data reception missions**
  - Landsat 5 Thematic Mapper (TM)
  - Landsat 7 Enhanced Thematic Mapper (ETM+)
  - 1 Km AVHRR
- **Landsat 5 and 7 satellite operations**
  - Mission Operations Centers (MOCs) located in Maryland

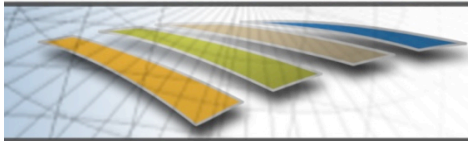


## EROS Data Reception Antennas

**LDCM**

- **Three Full Motion Satellite Antennas (3M ViaSat / 10M Datron / 5.4M ViaSat)**
  - Initial site preparation work completed for an additional antenna





## EROS Supports the Landsat Program Objectives

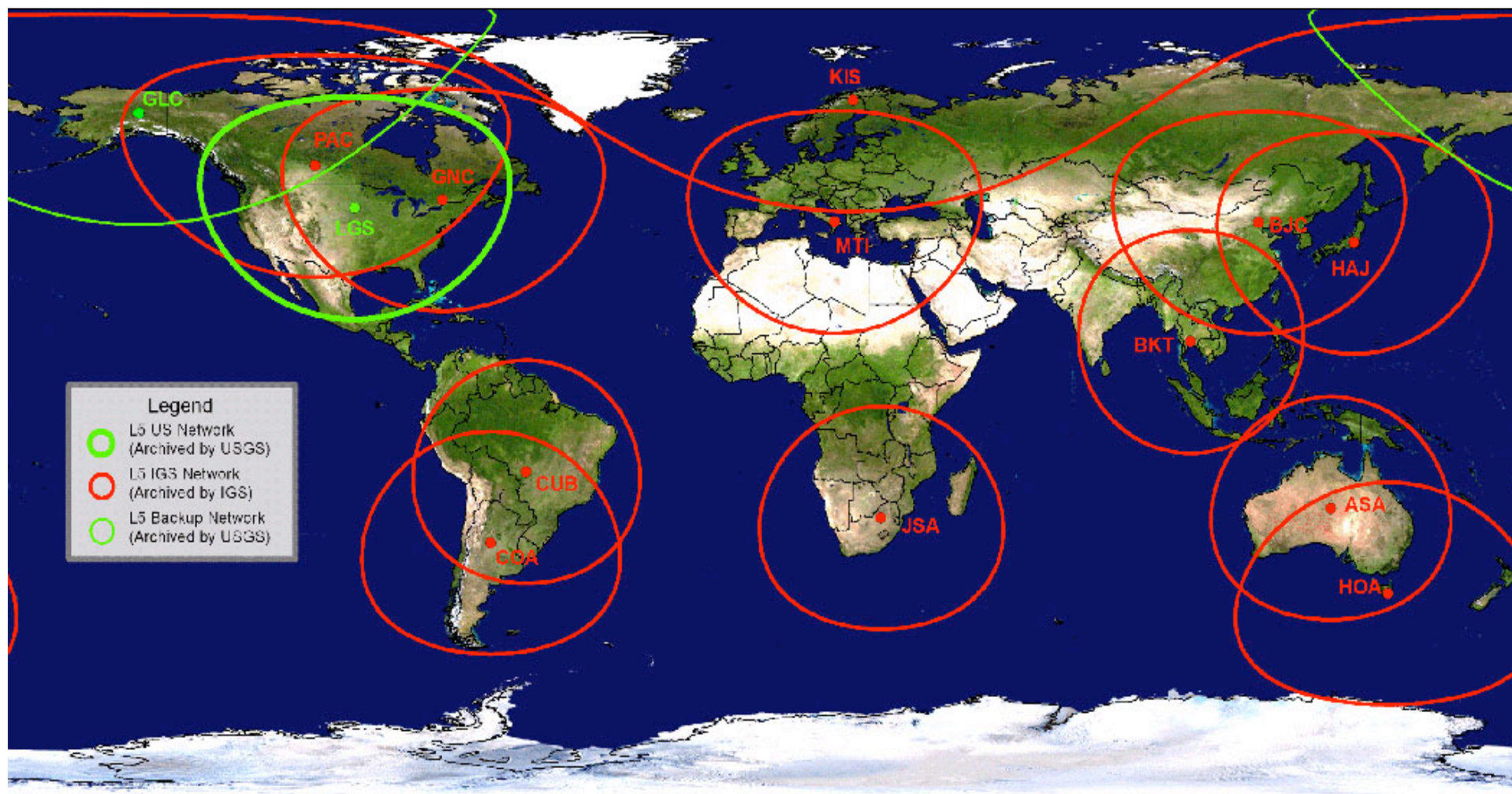
**LDCM**

- Maximize acquisition of cloud-free Landsat observations to support global change science
- Distribute Landsat data at no more than the cost of fulfilling a user's request
  - Planning to distribute LDCM data at no charge to the user
- Promote use of Landsat data for land remote sensing research and applications
- Establish and operate a global network of international cooperators
- Support emergency response applications within Landsat's constraints



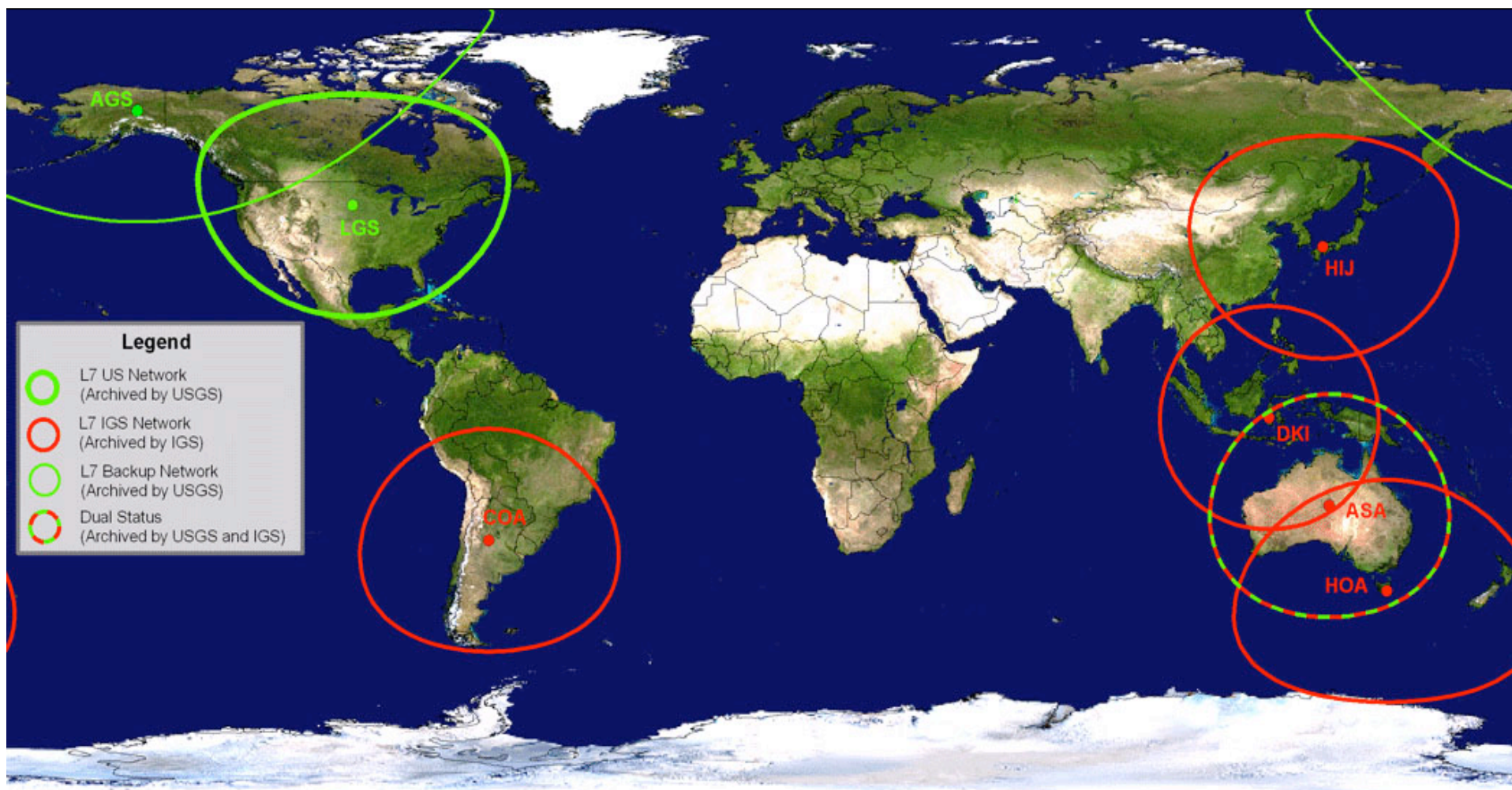
# Landsat 5 International Cooperator Network

**LDCM**





# Landsat 7 International Cooperator Network

**LDCM**



# EROS Archive Overview

**LDCM**

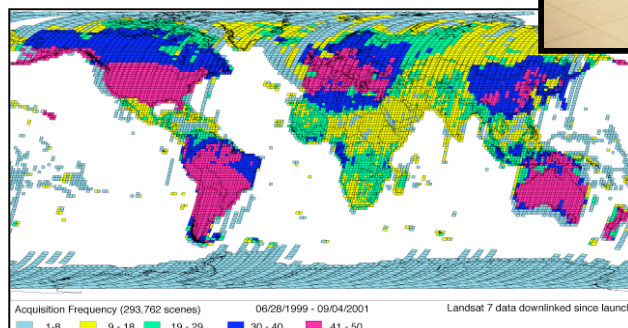
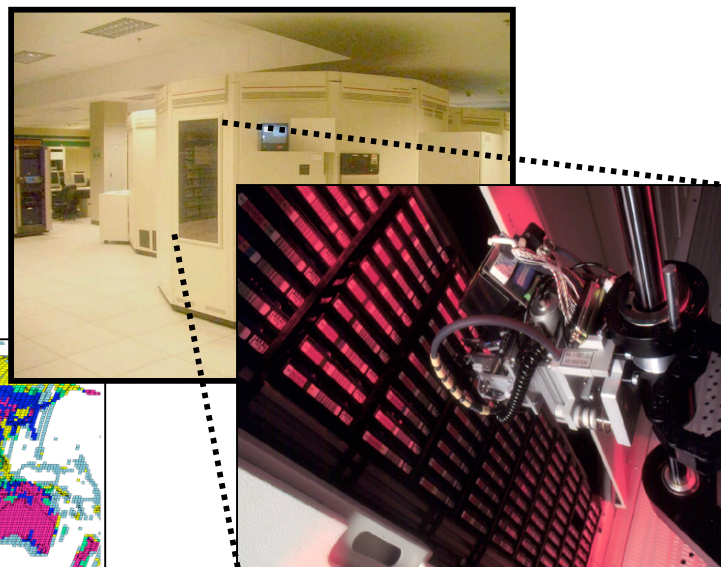
## Film Archives

- 1939 to Present
- 24 major collections
- Multiple film formats/sizes
- Over 8.6 million frames



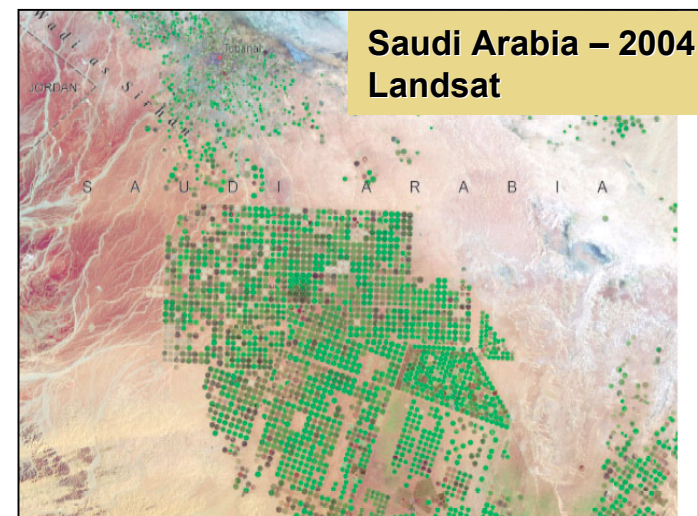
## Digital Archives

- 1972 to Present
- Grows by 2 Terabytes per day
- Contains over 3 Petabytes

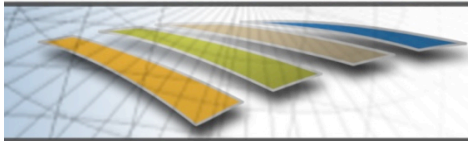




# Earth Image Archive Examples

**LDCM**






## LDCM Ground System Development Status

**LDCM**

- Recently completed Ground System Requirements Review (GSRR) on Sept 26-27; Reviewed segment level requirements
- Developing Level 4 (element) requirements through Q2 2008
- Planning Preliminary Design Review for Sept 2008



The banner features a background of a globe with a grid pattern. On the left, there are four overlapping, curved rectangular shapes in yellow, green, and blue. The text "USGS LDCM Procurement Status" is centered in a bold, black, sans-serif font. On the right side of the banner, the letters "LDCM" are displayed in a large, bold, blue, sans-serif font.

## USGS LDCM Procurement Status

**LDCM**

- **Ground Network Resources: RFPs to industry in 2008**
- **Flight Ops Team: RFP release Q1 2008; Award Q2 2008**
- **Operations MOC Facility (at EROS): Modifications in 2008/9**
- **Remainder of ground system to be procured through separate contracts in late 2007 / early 2008**
  - **Landsat Data Continuity Contract (LDCC)**
  - **EROS Technical Support Services Contract (TSSC)**



# USGS LDCM Project Organization

**LDCM**

